



Letter 151
RECEIVED

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

MAY 03 2000

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (425) 649-7000

May 2, 2000

ENERGY FACILITY SITE
EVALUATION COUNCIL

Mr. Allen J. Fiksdal
Energy Facility Site Evaluation Council
PO Box 43172
Olympia, WA 98504-3172

Dear Mr. Fiksdal:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Sumas Energy 2 Generation Facility (SE2GF). Our review of this energy project, which will construct and operate a 660 megawatt, combined-cycle combustion turbine electrical generating facility and associated components; including a new natural gas pipeline from Canada on a 37 acre site within the industrial area of Sumas and the potential route of construction for two 115kV transmission lines within Whatcom County, has identified a number of significant issues and concerns. Locating information in this document has been difficult. We recommend that the formatting schema (i.e. section numbering and page numbering system) be reviewed and revised to make it easier for the user to locate information.

1

We have three key areas of concern that do not appear to be adequately addressed by this DEIS. These concerns relate to impacts to wetlands, groundwater and wastewater. Our general concerns with the information presented in the DEIS are outlined below. Attached to this letter are our more detailed and specific comments on the DEIS.

- *Project Alternatives* - the DEIS presents only two alternatives; the generating facility and the no-action alternative. This build or not-to-build set of alternatives is not a sufficient range of reasonable alternatives for the type of project being proposed, particularly in light of the larger area of wetlands on site, the potential impacts to the Abbotsford-Sumas Aquifer and the Endangered Species Act listing for Salmonids and Steelhead. We think there is a need to present a full range of reasonable alternatives. We are very concerned with the environmental analysis of the two-transmission lines included in this DEIS since this was not included in the revised January 2000 application submitted to EFSEC. It could be treated as a separate alternative for analysis. Finally, alternative approaches to wastewater management need to be more thoroughly explored as part of a full range of reasonable alternatives. The City of Sumas sends its sewage discharges to the City of Abbotsford and no longer runs a wastewater treatment plant.
- *Wetlands* - subsequent environmental documents will need to completely re-evaluate the wetland impacts and proposed mitigation. From the information presented in the EFSEC application, it appears that the proposal may directly affect up to 22 acres of wetlands on site, not the two acres described in the DEIS. Most of these wetlands are described as "prior converted croplands", which are wetlands that the Corps of Engineers does not

2

3



regulate, but that the state does. The wetlands on the property need to be delineated properly using the state of Washington Wetland delineation manual. Once an accurate delineation is conducted, and only then can a mitigation strategy be developed.

3

- *Water Quality* - the DEIS for this project does not adequately address several water quality issues, including those associated with the presence of several waterbodies currently included on the state's 303(d) list for various contaminants. There also needs to be additional discussion of the potential for increased nitrate levels in the waterbodies, since this could further exacerbate existing problems with low dissolved oxygen levels.

4

- *Floodplain* - due to the proposed facility location in the 100-year floodplain, we are concerned about the management of the stormwater system. The treatment of stormwater may be unavailable during some flood events. The proposed location will have an impact on other property within the watershed, even if it meets FEMA requirements due to the loss of flood storage.

5

- *Socioeconomic* - there is a detailed description and analysis of the benefits of the facility construction on the economy, but costs are not as well described. There does not appear to be a similar cost-benefit analysis for the on-going operation of this facility. Additionally, there is no cost-benefit analysis of the impacts of this facility on the groundwater which is a source of irrigation and drinking water in this largely agricultural community.

6

- *Traffic, Parking and Transportation* - the assumption that a large temporary workforce needs to travel directly to the project site in single occupancy vehicles is a general concern. The impact of impervious surface created by a 300 -car onsite parking lot, which will be used only during the construction phase, has associated water quality and quantity implications. We would like to see a broader discussion of traffic reducing options described beyond the Rideshare opportunities. Ultimately a Commute Trip Reduction plan would not only decrease traffic volumes expected during the 18-month construction phase, but would also result in a decrease in impervious surface. Keeping the amount of impervious surface to a minimum will reduce the associated impacts to water quality and quantity.

7

- *Groundwater* - the project proposal is within the boundaries of the Abbotsford-Sumas Aquifer. This is the largest aquifer in the Nooksack River Valley and the Lower Fraser Valley in British Columbia. It is an extremely important source of drinking water and is highly susceptible to contamination; roughly 9800 people in Whatcom County rely on well water from the Abbotsford-Sumas Aquifer to meet all or part of their drinking water requirements. Much work has been done over the last ten years to characterize this important resource and to develop solutions to the problem of increasing nitrogen contamination. In particular, studies done on the nitrogen and pesticide contamination of the aquifer should be examined in light of the discussion of water withdrawals, surface water run-off and flooding. It is important that the potential for increased concentration of contaminants such as nitrates be clearly analyzed.

8

- *Endangered and Threatened Species* – the project proposal is within the boundaries of the Puget Sound Evolutionarily Significant Unit (ESU). Subsequent environmental documents on this proposal will need to more thoroughly evaluate the impacts to fish and wildlife. The DEIS does not adequately describe to what extent past agricultural use has contributed to the factors of decline in fish stocks. The environmental analysis needs to more clearly discuss how or whether the mitigation facilitates the recovery of listed species and prevents the current trend in the decline of fish and wildlife species due to habitat destruction. 9
- *Monitoring and Adaptive management*: The DEIS does not describe an adaptive management and monitoring component for the proposed mitigation and for the potentially unmitigatable impacts to the surface and groundwater quality. Subsequent environmental documents should include a discussion about how adaptive management and monitoring will be accomplished. 10

We are concerned about the adequacy of the SEPA review for the purpose of decision-making as it does not provide the information necessary for conditioning or denying any permits for this proposal.

Thank you again for this opportunity to comment. If you need to further discuss any of our concerns please contact either myself at (425) 649-7010 or Janet Thompson at (425)649-7128, we are located in our Northwest Regional office in Bellevue. Or you may contact Dick Grout with our Bellingham Field Office at (360)738-6255.

Sincerely,



Ray Hellwig
Regional Director, Northwest Regional Office

EIS #001645

cc: Alan Butler, NWRO
Paula Ehlers, SEA
Steve Hood, Nooksack
Rebecca Inman, SEA
Tom Luster, SEA
Joan Marchioro, AG's Office
Linda Pilkey-Jarvis, Spills
Buck Smith, NWRO
Erik Stockdale, NWRO
Janet Thompson, NWRO
Barry Wenger, Nooksack
Dick Grout, Bellingham Field office
Kurt Lay, WDFW
Bob Everitt, WDFW

Sumas Energy 2 Generation Facility Draft Environmental Impact Statement

SPECIFIC COMMENTS:

Section 1.3 - Description of Alternatives: the only two alternatives in the draft EIS for the major project element (the S2GF) are "build" and "no build". Chapter 2 provides some additional explanation of why other alternatives were not analyzed in the draft EIS, but the descriptions do not include any consideration of environmental impacts, such as wetland or water quality considerations. With the inclusion of 21.14 acres of prior converted wetlands on the proposed site, and with several water quality problems identified in local waterbodies, additional evaluation should be done on alternative sites for the proposal.

11

Section 1.3.1 - Proposed Action: based on information in the EFSEC application, the description of wetland impacts appears to be inaccurate. The site apparently has a large area of prior converted cropland wetlands, which are within state water quality jurisdiction. Any impacts to these wetlands must be evaluated and appropriate mitigation provided.

12

Section 1.4.2 Consultation - The Lummi Nation has ongoing concerns about impacts to surface water flows in the Sumas drainage. The Lummi's have protested virtually all requests for additional water rights in this area. It may be necessary for the applicant to consult with the Lummi Tribe.

13

Section 1.4.3 Role of EFSEC - In Table 1-1, the Department of Ecology, Water Resources Program should be included. Role/Authority is Water Right Permitting (and review). Table 1-1, should include compliance with the local shoreline program as a necessary part of the state's Coastal Zone Consistency review. Any work done within shoreline jurisdiction (such as pipeline crossings) must meet the requirements of the local shoreline program in order to be consistent with the state Coastal Zone Management Program.

14

Section 1.6 - Summary of Potential Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts: the section does not adequately characterize wetland impacts.

- In Table 1-2, page 1-13 - Water Resources Operation, fourth bullet: if senior rights are adversely affected by increased pumping, mitigation measures may be required. Mitigation may include reduced pumping, supplying water to the affected party, or paying to modify the impacted point of withdrawal.
- In Table 1-2, page 1-12: for the construction phase, it is proposed that a Storm Water Pollution Prevention Plan will be developed to address the management of oils and wastes. The plan needs to address notification procedures for spills and emergency response actions. Employees should be aware of what types of spills need to be reported, where to make notifications, and the type of cleanup equipment available. Employees should be aware of the contents of the spill plan and have access to the information.

15

16

- In Table 1-2, page 1-21: Fish and Wildlife Operation - Fish, the impacts of additional groundwater withdrawals which may cause a lowering of stream flows is not included. 17

Section 2.2.1.1 - Construction - Generation Plant Site: placement of approximately 130,000 cubic yards of fill in the floodplain could result in the loss of about 80 acre-feet of flood storage (not counting displacement of flood storage by any structures on site). The proposal should include mitigation for the loss of this flood storage. 18

Section 2.2.1.2 - Construction - Natural Gas Supply Pipeline: the proposal should include sampling of all hydrostatic test water to determine suitability for release from the stormwater pond or transport to a treatment facility. 19

Section 2.2.2.1 - Operation - Management of Fluids at Plant Site: the draft EIS discusses a containment berm for on-site fuel storage, but does not describe any secondary containment for the other fluids listed in Table 2-1. There also needs to be an evaluation of how these fluids will be contained during flood events, including a description of spill prevention and response. 20

Section 2.2.2.2 - Site Security Page 2-17 makes reference to using straw bales and silt fencing to prevent vehicle access to wetlands. They should also be designed to prevent silt and excess nutrients from entering wetlands. 21

Page 2-18, paragraph 3 indicates that an emergency response plan will be prepared. Protection of the environment is not included as a goal of the plan. Protection of the environment should be addressed in the plan as well as other plans developed for the facility 22

Section 2.2.2.3 - Operation - Transmission Line Maintenance: this section describes an ongoing wetland impact that may require additional monitoring or mitigation. 23

Section 2.2.2.3 Transmission Line Maintenance: Page 2-18 describes the proposed power line-clearing scheme. There is an option to trim selectively rather than completely remove vegetation in the zone within 25 feet of the power line. In riparian areas, selective trimming should be required to maximize the shading from riparian vegetation. This section describes an ongoing wetland impact that may require additional monitoring or mitigation. 24

The same paragraph indicates that there is a zone where conifers less than 20 inches in diameter and deciduous trees less than 25 inches in diameter will be removed. This will prevent recruitment into the larger size classes and limit future shading. The same trimming option available in the first 25 feet should be used in the next zone. 25

Section 2.2.2.5 - Backup Power Generation Fueling Page 2-19 makes reference to secondary containment for the fuel tank storage area. It is unclear how the stormwater for the area will be treated. Any spilled fuel should be separated before it is discharged. 26

Section 2.4.1 - Generation Plant Site: the description of on-site wetland impacts is inaccurate. Also, proposed mitigation needs to reflect the loss of any prior converted wetlands.

27

Section 2.4.2 - Natural Gas Supply Pipeline: further analysis should include more details on how pre-construction wetland hydrology will be maintained.

28

Section 2.4.4 - Whatcom County 115 kV Transmission Lines: the document states that wood poles will be used. Further analysis should describe whether the poles will be treated, what kind of treatment is proposed, and what measures will be taken to prevent any leachate from reaching surface or ground water sources.

29

Section 2.6.3 - Wastewater Discharge: the draft EIS describes a preliminary approach to send discharges to the Abbotsford treatment plant. Since this is a tentative approach and has not yet been fully negotiated and agreed upon, the document should also provide additional description and analysis of the other option, that of acquiring an NPDES permit for discharges from the proposed facility. This is also appropriate in respect to the need to evaluate the full range of reasonable alternatives in an EIS.

Page 2-30 states that the City of Sumas has a wastewater treatment plant and a NPDES permit to discharge up to 124,000 gallons per day into the Sumas River. The Department of Ecology, at the request of the City of Sumas, canceled the NPDES permit # WA002094 on April 14, 2000. This section further states that the discharge is expected to be to Canada (FVRD) via the City of Sumas. However, the last paragraph indicates an agreement to accept this discharge may not have been reached. As the City of Sumas does not have a NPDES permit authorizing discharges to the Sumas River, if no agreement is reached with the FVRD, where will the wastewater be discharged? If alternative discharge plans are considered it must be remembered that, prior to a discharge to state waters, a State Waste Discharge permit must be obtained. Prior to issuing a permit the flow must be characterized so that a permit incorporates pretreatment requirements to meet state water quality standards.

30

2.6.3 Water Supply - The cooling system water needs are 849 gallons per minute (gpm). Can some or all of this water be recycled/reused? Why is cooling tower blowdown water considered wastewater?

31

Section 3.1 - Air Quality: The proposal must meet the applicable requirements of the federal Clean Air Act in order for the state to issue concurrence with the proposal's Coastal Zone Consistency determination.

32

Section 3.1.4.2 - Operations: Pages 3.1- 14 through 3.1-18: 40 CFR 52.21(o) states: "Additional impact analyses. (1) The owner or operator shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial and other growth associated with the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value. (2) The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of

33

general commercial, residential, industrial or other growth associated with the source or modification.”

The applicant needs to supply impact analyses for the Class II areas around the facility as required under 40 CFR 52.21(o). There is a good discussion of this type of analysis in Section II.C of the New Source Review Workshop Manual. Please include this analysis in the EIS.

33

The applicant appears to have looked at the impact of SO₂ emissions on Class I Areas, but does not appear to have examined the Class II Areas in the immediate vicinity of the proposed source. Please include this analysis in the EIS.

Section 3.1.4.2 Operation: The cumulative impacts of particulate matter on soil, surface and ground water should be quantified. The air emissions are only evaluated for human health and aesthetics. There does not appear to be any information for these other environmental media.

34

Section 3.2.2.1 - Surface Water: the description and evaluation of the nearby surface water bodies is inadequate. Several of the water bodies are on the state's list of impaired waterbodies (the 303(d) list), including the following:

Waterbody:	303(d)-Listed for:
Bone Creek	N/A
Bertrand Creek	Instream flow, ammonia-N, dissolved oxygen
Dakota Creek	Dissolved oxygen, fecal coliform
Double Ditch	Fecal coliform
Johnson Creek	Dissolved oxygen, fecal coliform
Nooksack River	Fine sediment, fecal coliform
Sumas Creek	Dissolved oxygen, fecal coliform
Sumas River*	Dissolved oxygen, fecal coliform

35

Note: the Sumas River has a total maximum daily load (TMDL) plan in place for dissolved oxygen. Further analysis should be provided showing whether the proposed project will meet the requirements of the TMDL.

All water quality discussions in subsequent documents should analyze the impacts of the proposal on these waterbodies, and should specifically address the concern as to whether the project's construction and operation will allow water quality standards to be met in these waterbodies.

Section 3.2.2.2 – Groundwater, (pp. 3.2-8 - 3.2-12): based on the description of the site hydrogeology it appears that the groundwater system may provide an important contribution to baseflow in the surface waterbodies on site, especially during lower precipitation summer months. Further documentation should include a water balance that more specifically describes the baseflow contributions from the site, especially for areas proposed to be covered with impervious surfaces. Specific locations of agricultural drain tiles on site should

36

be determined, and any proposed alterations to the drain tile system described. If the project involves modifying site agricultural drain tiles, potential consequent changes in baseflow contributions from the site should be addressed. 37

Page 3.2 -5 to 3.2-6 indicates a dramatic increase in the amount of groundwater that would be pumped to supply the facility. This raises serious questions about the impact of that additional pumping and withdrawal on already high nitrate levels in the Sumas aquifer. This is an issue that needs a much more thorough analysis than currently provided by the proponent, including field-testing. Additionally, the impacts of infiltrating nitrogen rich water back into the groundwater need to be addressed. groundwater flow modeling. 38
 Additionally, withdrawal impact on groundwater quantity and quality in the nearby City of Sumas wells should be addressed. City of Sumas wells currently have groundwater quality problems believed to be due to land uses near Abbotsford, British Columbia.

Section 3.2.2.3 - Floodplains: further analysis is needed showing proposed mitigation for loss of flood storage. 39

Section 3.2.3 - Water Resources - Environmental Impacts of Proposed Action: There needs to be additional analysis of the probable impact to the water quality in the nearby waterbodies. Construction or operation of the facility must not result in further exceedances of the 303(d)-listed contaminants in the waterbodies listed above. 40

Additionally, the document discusses the possibility of additional nitrate contamination in surface water due to groundwater extraction. Higher nitrate levels could lead to additional problems with dissolved oxygen levels in the waterbodies due to increased algal growth. There should be additional analysis provided on how this additional nitrate might affect the above listed contaminants or might effect compliance with water quality standards, including compliance with water quality numeric and narrative criteria, antidegradation, and beneficial uses. 41

There is inadequate analysis of the impact of new impervious surface to the baseflow of local waterbodies and the role of that baseflow in maintaining beneficial uses of the waterbodies. While the impact could be small and relatively local, subsequent documents should provide a more thorough description of that impact and proposed mitigation. 42

There may also be baseflow impacts due to groundwater extraction. There should be additional analysis provided impacts to baseflow due to the interaction of groundwater pumping and additional impervious surfaces. 43

Section 3.2.3.1 - Construction: further analysis is needed showing how construction-related stormwater will be adequately detained and treated during flood events. 44

Additionally, the draft EIS states that "substantial setbacks" (p. 3.2.19) will be used for horizontal direction drilling beneath streams and wetlands. These are further described as "100-foot setbacks... from the creek banks" (p. 3.2.20). Some of these areas may be within shoreline jurisdiction and therefore subject to compliance with the local shoreline master program. Subsequent documents should include maps or conceptual plan drawings showing 45

the distance from waterbodies, buffers, and riparian zones, and should also describe how these activities comply with the local shoreline program. 45

Subsequent documents should also describe proposed sampling and analysis of hydrostatic test water and how it will be determined whether to release this water into onsite detention facilities or to a sanitary sewer. 46

Section 3.2.3.2 - Operation: further analysis is needed on several elements related to stormwater detention and treatment, including the following:

How will stormwater be adequately detained and treated during flood events, particularly as the stormwater detention and treatment system is within the 100-year floodplain? 47

What effect will the proposed stormwater detention have on stream temperature? 48

What effect will the proposed stormwater detention and treatment have on the 303(d)-listed contaminants in Johnson Creek (dissolved oxygen and fecal coliform)? 49

Subsequent documents should provide further analysis on each of these issues and a Stormwater Pollution Prevention Plan (SWPPP) should be submitted for approval as part of project review. Additional details should also be provided about the proposed stormwater facility design, including any measures proposed to limit increased water temperatures, to prevent fecal coliform exceedances (e.g., due to bird use, other wildlife use, etc.), and to avoid discharges with low dissolved oxygen levels. 50

3.2.2.4 Public Water Supply (Water Rights) - The two listed water rights (G1-23698 & G1-26398) have not been certificated. Both rights are currently still in permit status. The City of Sumas has submitted a Proof of Appropriation of Water form for G1-23698P. Upon final inspection by the Department of Ecology, if the permitted quantities have been perfected and all provisions have been abided by, then a final certificate of water right will be issued. The water use authorized by G1-26398P has not been fully developed. A certificate for this permit will not issue until full perfection. 51

Please note and correct reference: one acre-foot (AF) is equivalent to 325,851 gallons. 52

3.2.2.4 Public Water Supply (May Road Well Field) - Water Right Permit G1-23698P is currently authorized for two points of withdrawal (wells 1 and 3). The permit should be amended to include an additional point of withdrawal. See the process outlined in RCW 90.44.100. 53

Second paragraph, second sentence - "Thus, the total mitigation requirement is capped at 75.996 acre-feet per year." This sentence is incorrect. The mitigation requirement is 18%, up to 422.2 acre-feet per year. 54

In Table 3.2-1, the Average Annual Demand (728 AF/year) plus the Average Annual Available Supply Rate (653 AF/year) for the May Road Well Field does not add up to 1,403 AF/year. Also, please correct acre-foot equivalent as noted above. 55

3.2.2.4 Public Water Supply (Municipal Well Field) - The City of Sumas holds five water right certificates for this well field. It appears that at least some of these rights went to certificate before the water use was fully perfected. Recent court decisions have indicated that certificates of this nature are legally questionable. The certificates issued for a combined instantaneous rate of 2,250 gpm and 1919 AF/year. Records indicate much smaller quantities have actually been perfected by beneficial use. The City of Sumas should consult the Department of Ecology for guidance in regard to further development of these water rights. 56

Each appurtenant ground water right should be amended to reflect the current five points of withdrawal.

Please verify the status of Surface Water Right 3427. Is the diversion works still in existence? 57

Unbilled water accounts for approximately 200 AF/year (1,259 AF/year minus approximately 1,000-1,050 AF/year). Please identify the use of this water. 58

It appears that current instantaneous supply will not meet sustained peak demand. Will additional wells or additional storage be necessary? 59

Section 3.2.2.5 Water System Infrastructure: How will cooling water move from the municipal well field to the S2GF? From which municipal well field wells? 60

Section 3.2.3.1 - Construction Surface Water Quality: Page 3.2-20 makes a reference to using the permanent detention/wet pond for settlement. The geometry of detention ponds frequently creates a problem of short-circuiting which makes them ineffective as settlement basins without special adaptations to ensure hydraulic residence time is achieved. 61

This same page (3.2-20) also makes reference to removing residual chlorine from the water prior to its discharge to a stormwater system. The water should be tested for residual chlorine prior to discharge. Where feasible, water should be dechlorinated prior to use. 62

Section 3.2.3.2 - Operation - Surface Water, page 3.2-22: indicates that hazardous material may enter the stormwater detention/wet pond. The use of the stormwater detention/wet pond as the reservoir for spilled hazardous material requires that the pond be impervious, and that it be drained and cleaned after a spill. This is not compatible with the support of the biological activity that makes a wet pond effective. Hazardous spills should be prevented from entering the detention/wet pond. 63

Risk to surface water from sludge application or disposal is not addressed. Sludge should be characterized prior to disposal to ensure proper disposal methods. 64

Stormwater impacts are not adequately discussed in this section. Several stormwater impacts are addressed below in the floodplains section where the stormwater impacts are discussed in the draft EIS. 65

Section 3.2.3.2. Operations - Floodplains: Peak flows should be better mitigated. Table 1.2 on Page 1-12 indicates that guidance from the Stormwater Management Manual for the Puget Sound (Ecology 1992 or as revised) is used for the design of construction phase erosion and sedimentation control. Similarly, the revised manual should be used to regulate the peak flows. Section 2.3 Description of Proposed Action on Page 2-3 indicates that the size of the pond is predicated on a 10-year storm event. The system should be designed to control flow from larger than 10-year storms. Page 3.2-28, paragraph 2 indicates that the detention could be sized for a 100-year storm.

66

The most recent version of the guidance titled "Stormwater Management in Washington State," August 1999, is still in draft form. The final version may be published before the construction phase begins. The latest draft recommends corrections to the Santa Barbara Urban Hydrograph method to make an allowance for the fact that the detention volume may be partially occupied by water still being released from a previous storm. It also limits the duration of discharge for storms up to a 50-year storm. It is recommended that alterations to the stormwater detention system be designed using the latest draft of the Stormwater Manual.

Figure 3.2-7 indicates several of the catch basins will be below the 100-year flood plain elevation. Assurance must be made that spill control plans will still be effective.

67

It is unclear at what storm recurrence interval the stormwater system will cease to function as designed. Please clarify. How often will treatment be expected to fail? How frequently will the detention system be expected to be non-functional?

68

Page 3.2-28 indicates the City of Sumas system of discharge to FVRD will not be functional during a 100-year storm. Section 3.2.5.3 indicates many options are available for mitigation should systems fail. These "options" should be requirements, or adequate storage must be required to ensure no discharge occurs as a result of a non-functional collection system

69

Section 3.2.5.1 - Mitigation Measures - Surface Water: the project proponent should also propose sampling and testing requirements to ensure the hydrostatic test water meets discharge requirements to either the stormwater facility or sanitary sewer system.

70

Section 3.2.5.3 - Mitigation Measures - Floodplains: there should be additional discussion about how long the facility could operate in a flood with the proposed mitigation measures. The draft EIS states that blowdown could be trucked during floods "if roads become passable," but there is no description of what length of time the facility expects to operate during flood events and contingencies based on the duration of a flood.

71

Section 3.2.6.3 - Public Water Supplies - Number three states, "When the demand starts nearing the water right limitations, the City can petition the Department of Ecology, requesting additional water rights." The city of Sumas, Sumas Energy 2, and the public needs to be made aware that obtaining new water rights in this area will certainly be problematic. The Johnson Creek-Sumas River drainage is closed to any further surface water allocations. Hydraulically connected groundwater is also closed.

72

Section 3.4 - Wetlands and Vegetation: this section needs to be completely revised to reflect the additional wetlands that would be affected by the proposal. Documentation provided in the EFSEC application shows 21.14 acres of prior converted wetlands on site that would be directly impacted by the proposed facility and that are not at all addressed in the draft EIS. The wetland mitigation proposal needs to be revised to reflect this additional impact.

73

Also, these prior converted wetlands on site are likely contributing baseflow to the creek. Additional baseflow impact analysis should be provided showing these areas as wetlands rather than upland areas.

74

The draft EIS also states that the proposed wetland mitigation area would provide additional stormwater capacity, but is not intended to serve as a stormwater facility (p. 3.4.24). Additional information is needed on how this wetland mitigation area will function and whether it is meant to treat stormwater during flood events.

75

There should also be further analysis of the continuing impacts of vegetation maintenance in the wetlands being crossed by pipelines and transmission lines.

76

Wetlands Delineation:

The evaluation of wetland impacts in the draft EIS is based on a wetland delineation that is inadequate. If a proper delineation is not conducted, impacts from the project are likely to result in significant adverse impacts to state water quality, in violation of Chapter 90.48 RCW.

The wetland delineation for the proposal was conducted in 1995. Pursuant to a memorandum of understanding in effect with the U.S. Army Corps of Engineers at the time, the U.S. Natural Resources Conservation Service (NRCS) verified the delineation. At the time, NRCS used the Food Security Act manual to verify wetland delineations on agricultural lands (not the 1987 Corps delineation manual). The NRCS determined that much of the property was "prior converted cropland" according to the Food Security Act (FSA). The FSA excludes many wetland areas from Section 404 of the Federal Clean Water Act if they meet certain cropping history and modified wetland hydrology criteria. The problem from Ecology's perspective is that many wetlands that are determined to be "prior converted croplands" still meet the criteria of biological wetlands in the 1987 Corps of Engineers wetland delineation manual and the 1996 Washington State Wetlands Identification and Delineation Manual.

77

The consequence of the regulatory "loophole" in the Food Security Act is that tens of thousands of acres of agricultural areas in Western Washington are excluded from federal wetland regulations. This is in spite of the fact that those areas are biological wetlands that provide valuable wetland functions. They are not exempt from state or local regulations. Applicants who are granted a "prior converted cropland" exemption from the Clean Water Act mistakenly assume that they have escaped from state and local wetland regulatory requirements.

Washington State does not recognize the prior converted exemption. The prior converted label does not reflect wetland function. Cindi Barger at the U.S. Army Corps of Engineers

stated to Ecology staff Erik Stockdale, on March 31, 2000, that a portion of the "prior converted cropland" wetlands on the proposal site are biological wetlands.

The degraded vegetative communities of these wetlands "mask" important hydrologic and water quality functions the wetlands provide. The site is likely providing important base flow support to Johnson Creek, in addition to moderating peak flows. Additionally, many "prior converted cropland" wetlands provide important overwintering habitat for migratory waterfowl. Case in point: Many of the overwintering grounds for trumpeter swans in the Skagit Valley likely meet the "prior converted cropland" exclusion.

78

As the EIS mistakenly limits impact evaluation to non-prior converted wetlands, it misses the mark on wetland impacts and is therefore flawed. The State of Washington retains a strong interest in regulating the important functions these areas provide. The wetland delineation needs to be updated, using the 1996 Washington State Wetlands Identification and Delineation Manual, in order for the EIS to be considered adequate. Until an adequate delineation is conducted, a defensible wetland mitigation strategy cannot be formulated.

Mitigation:

The current wetland mitigation proposal is inadequate to compensate for the identified wetland impacts. This does not include the additional wetland impacts that may be disclosed after an acceptable delineation is conducted.

The mitigation is segregated into the corner of the project site and involves the excavation of an area adjacent to an existing high quality wetland. This is likely to result in degradation of the existing wetland and may not result in a net increase in wetland functions.

The applicant should identify alternative mitigation sites near the project site that include the restoration of former wetlands, and develop a mitigation plan based on a landscape profile of the Sumas area wetlands (following recommendations of Kentula et al. 1999). Many agricultural sites exist in the area that could be restored and may be more likely to replace the lost hydrologic functions of the wetlands on the project site.

The combined wetland mitigation ratio is overstated, as less credit is given for wetland enhancement than wetland creation and restoration. Typically, half the credit is given. The actual amount of proposed mitigation is 1.5 acres of creation and 0.28 acres of enhancement (half of 0.56) for a total of 1.78 acres of mitigation for impacts to 1.9 acres of wetlands. Given the currently identified wetland impacts, the proposed mitigation is less than one to one.

79

The following table outlines the wetland mitigation "target" ratios used by Ecology:

Wetland Rating	Creation and Restoration	Enhancement *
Category I	6:1	12:1
Category II or III	Forested - 3:1	6:1
	Scrub/shrub -2:1	4:1
	Emergent - 2:1	4:1

Category IV	1.25:1	2.5:1
-------------	--------	-------

Notice that the ratios for enhancement of existing (presumably degraded) wetlands is double that of creation and restoration. This is necessary to offset the net loss of wetland acreage, as well as to offset the tradeoff of certain wetland functions that occurs when wetlands are enhanced. Additional guidance on this is available in Ecology's publication (#97-112) titled How Ecology Regulates Wetlands, available at <http://www.wa.gov/ecology/sea/pubs/97-112.html>.

Other elements necessary in the wetland mitigation report include:

- An accurate estimate of site features, including: hydroperiod, water depth, water supply, substrate, and water quality;
- Clear, sound technical design narrative;
- Clear and sound construction narrative;
- A monitoring plan;
- A maintenance plan; and
- A contingency plan for the following: exotic species invasion, grazing of plantings, catastrophic events (floods, storms, and droughts); human impacts (mowing, ditching, off-road vehicles etc.).

The mitigation report should follow the outline recommended in the interagency publication titled Guidelines for Developing Freshwater Wetlands Mitigation Plans and Proposals (Ecology publication # 94-29) also available on Ecology's homepage.

Buffers:

An inadequate buffer width is proposed around the wetland slated for preservation. The EIS states that a 25-foot buffer is proposed for this 8.8 acre scrub-shrub and forested wetland. It is unclear how this wetland was rated, so we are unable to suggest a minimum buffer width necessary to protect the wetland. What can be said with certainty is that the scientific literature clearly indicates that a 25-foot buffer on scrub-shrub and forested wetlands, adjacent to an industrial facility, is clearly inadequate.

The EIS should state what the scientific literature indicates is necessary to protect the wetland, not what the City of Sumas Shoreline Master Program regulations require as a buffer. Most buffer standards in Shoreline Master Programs across the state do not meet current "best available science" buffer standards.

Ecology's website provides specific guidance on buffer standards. This literature is readily available and should be consulted to prescribe a protective buffer on the wetland.

Ecology recommends the following wetland buffer widths, according to wetland rating:

Wetland Rating	Buffer Width
Category I	200 - 300 feet
Category II	100 - 200 feet

79

80

Category III	50 - 100 feet
Category IV	25 - 50 feet

Additional guidance on wetland buffer issues is available in Ecology's publication (number 97-112) titled How Ecology Regulates Wetlands, available at <http://www.wa.gov/ecology/sea/pubs/97-112.html>.

80

If the project proponent continues to propose a 25-foot buffer, then mitigation for this impact needs to be evaluated in the EIS.

Limitations of review:

The review of wetland impacts for the proposal has been limited to the power plant site. Wetland impacts associated with the transmission line, gas line, and other utilities have not been reviewed in depth. The impact analysis flaws identified above raise concerns regarding the analysis of impacts from the gas, utility and transmission lines. The delineation methodology used to evaluate the latter impacts needs further scrutiny, as does the mitigation evaluation.

81

Section 3.5.2.2 - Fish and Wildlife - Key Species: Table 3.5-1 lists several ESA-listed species as possibly using nearby waterbodies. This should be evaluated more thoroughly, especially given the possible project impacts on baseflow and water quality to some of those waterbodies. This may be especially important in Johnson Creek (per the draft EIS discussion on pages 3.5-11 and 3.5-14).

82

Additional information should be provided (perhaps through an SWPPP) on how potential impacts of directional drilling can be avoided or minimized (p. 3.5-17).

83

OTHER

Chapter 5 – Acronym List: Page 5-6 should include in the list SCCLP.

84

Maps – A number of the maps through out the document are difficult to read.

85